

## CLAIMS

1. A voice multi-tap apparatus for a communications system, said apparatus  
5 including:  
    an input connector accommodating at least four input circuits for voice communication;  
    a plurality of output connectors incorporating respective output circuits coupled to respective input circuits; and  
10     at least one of said output connectors incorporating a second output circuit coupled to one of the input circuits via a switching device whereby the operation of said switching device allows said at least one output connector to service two circuits for voice communication.
- 15 2. The apparatus of claim 1 wherein the input connector is a connection socket.
3. The apparatus of claim 1 wherein at least one of the output connectors is a connection socket.
- 20 4. The apparatus of either claim 2 or claim 3 wherein the connection socket is a modular type socket, preferably selected from the group including RJ11, RJ12 and RJ45 type sockets.
5. The apparatus of claim 1 wherein the input connector is a connection plug.
- 25 6. The apparatus of claim 1 wherein at least one of the output connectors is a connection plug.
7. The apparatus of either claim 5 or claim 6 wherein the connection plug is a  
30 modular type jack, preferably selected from the group including RJ11, RJ12 and RJ45 type jacks.

8. The apparatus of any one of the preceding claims wherein the input and/or output connectors are mounted on a printed circuit board.

7. The apparatus of any one of the preceding claims wherein the switching mechanism is a slide switch, a micro switch, a toggle switch or a push button switch.

8. An apparatus for providing additional modular connection ports for equipment utilising a voice channel within a structured cabling system, said apparatus including:  
an input port for receiving a plurality of signalling lines from existing modular access ports within the structured cabling network;  
a first switch coupled to said input via a first pair of signalling lines from the plurality of signalling lines;  
a second switch coupled to said input via a second pair of signalling lines from the plurality of signalling lines; and  
a plurality of modular output ports, said output ports being coupled to said switches and wherein at least two of the modular output ports are directly coupled to said input by a third pair and a fourth pair of signalling lines from the plurality of signalling lines.

9. An apparatus for providing additional modular connection ports for equipment utilising a voice channel within a structured cabling system said apparatus including:  
a first input port for receiving a plurality of signalling lines from existing modular access ports within the structured cabling network;  
a first switch coupled to said first input via a first pair of signalling lines from the plurality of signalling lines;  
a second switch coupled to said input via a second pair of signalling lines from the plurality of signalling lines; and  
a first set of modular output ports, said output ports being coupled to said first and second switches and wherein at least two ports of the first set of output ports are directly coupled to said first input by a third pair and a forth pair of signalling lines from the plurality of signalling lines.  
a second input port for receiving a plurality of signalling lines from existing modular access ports within the structured cabling network;

a third switch coupled to said second input via a fifth pair of signalling lines from the plurality of signalling lines;

a fourth switch coupled to said second input via a sixth pair of signalling lines from the plurality of signalling lines; and

5 a second set of modular output ports, said output ports being coupled to said third and fourth switches and wherein at least two ports from the second set of output ports are directly coupled to said second input by a seventh pair and an eighth pair of signalling lines from the plurality of signalling lines.

10 10. The apparatus of either claim 8 or claim 9 wherein the input port includes a connection socket.

11. The apparatus of either claim 8 or claim 9 wherein at least one of the output ports includes a connection socket.

15

12. The apparatus of either claim 10 or claim 11 wherein the connection sockets are modular type sockets, preferably selected from the group including RJ11, RJ12 and RJ45 type sockets.

20 13. The apparatus of claim 8 or claim 9 wherein at least one of the input ports and at least one of the output ports is a connection plug.

14. The apparatus of claim 13 wherein the connection plug is a modular type jack, preferably selected from the group including RJ11, RJ12 and RJ45 type jacks.

25

15. The apparatus of any one of claims 8 to 14 wherein the input and/or output ports are mounted on a printed circuit board.

30 16. The apparatus of any one of claims 8 to 15 wherein the switching mechanism is a slide switch, a micro switch, a toggle switch or a push button switch.

17. The apparatus of claim 9 wherein the second input port and said second set of modular output ports are arranged in a back to back configuration with the first input and said first set of output ports.